

FloBoss™ 107/107E Flow Manager Interface

Dynamic Interface and
LCD Touchpad.

Remote Automation Solutions



ROCLINK 800 Overview

- The FloBoss 107 introduces new user-friendly features that make configuration, operation, and troubleshooting easier than ever!
- These features are implemented in ROCLINK 800 and the unit's new LCD Touchpad.
- User access is limited by log-on identifier IDs and passwords for both ROCLINK 800 and the LCD Touchpad.



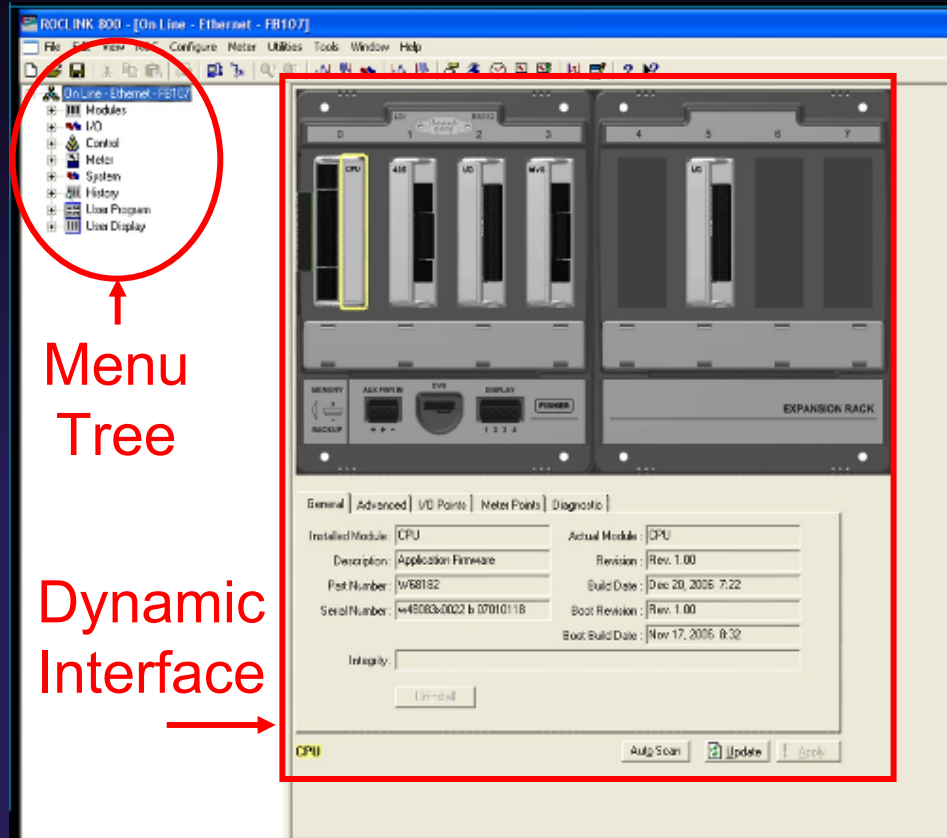
ROCLINK 800 Overview (cont'd)

- ROCLINK 800 Configuration Software, a Windows®-based program, provides the capability to monitor, configure, and calibrate the FloBoss 107 Flow Computer products.
- It has been designed to be easy to use and understand by novices and experienced users alike.



ROCLINK 800 Overview (cont'd)

- You can use the familiar menu tree to navigate ROCLINK 800.
- Or use the new Dynamic Interface that gives you a graphical representation of the FloBoss 107.



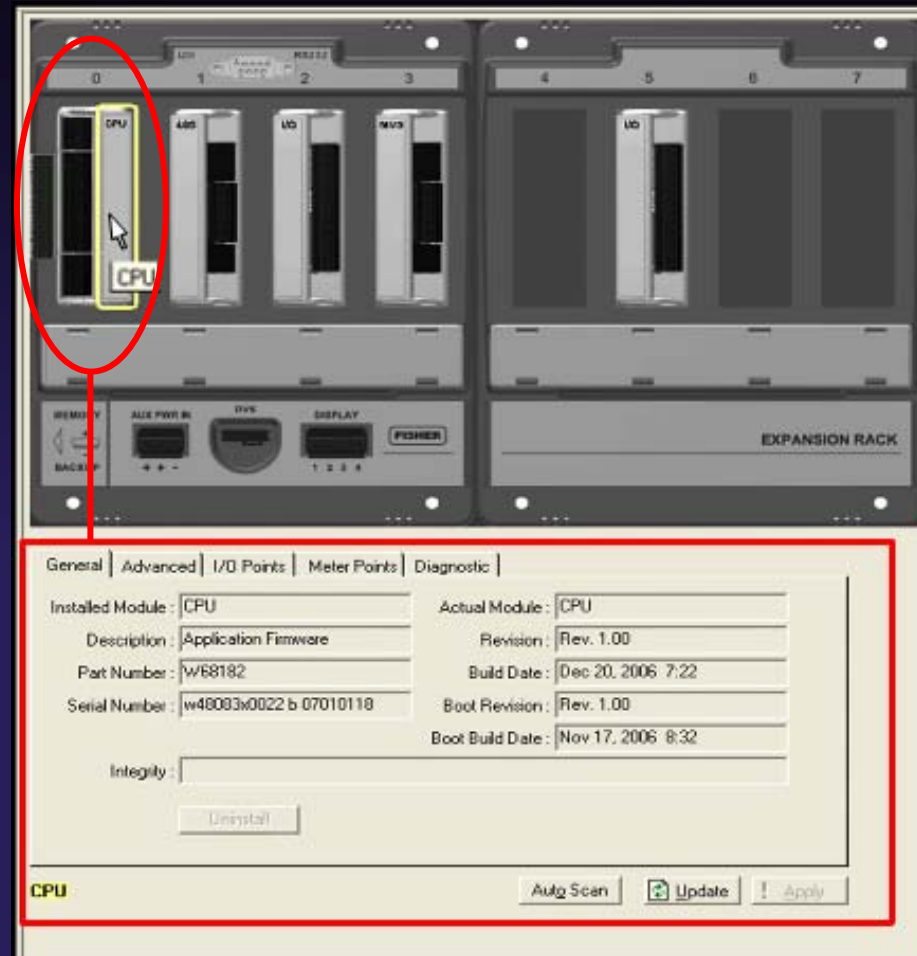
ROCLINK 800 Dynamic Interface

- Dynamic Interface identifies graphically the type of module installed in each module slot. This is done automatically by the software.
- If modules are added or removed over time, dynamic interface updates the graphical display.
- When configuration files are opened remotely, you can visualize the actual FloBoss 107 configuration.



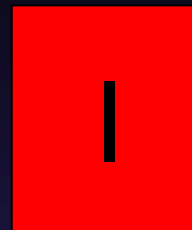
ROCLINK 800 Dynamic Interface (cont'd)

- Dynamic Interface makes it easier than ever to configure the FloBoss 107.
- You point and click on modules to configure or troubleshoot them.
- In this example, clicking on the CPU module displays its parameters.

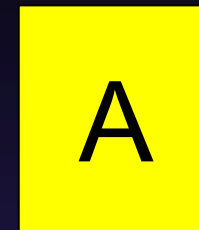


ROCLINK 800 Dynamic Interface (cont'd)

- Dynamic Interface displays two kinds of color-coded status alerts: Integrity and Alarm.
- **Integrity** indicates hardware problems such as:
 - Communication Failure between FloBoss 107 and plug-in module.
 - Module Mismatch if a module installed in a slot differs from the saved configuration.
 - Out of Range input or output signal.
 - Integrity Failure when FB107 cannot communicate with associated devices.
- **Alarms** occur when user-defined alarm limits have been exceeded, such as high or low values.



Integrity



Alarm

ROCLINK 800 Dynamic Interface (cont'd)

- You can quickly see an integrity problem with a module, or alarm status of a point, when a red “I” or a yellow “A” indicator appears next to the module.
- Clicking on either indicator brings up additional information to help you investigate the problem.

The screenshot displays the ROCLINK 800 Dynamic Interface. The top portion shows a rack of modules with slots 0 through 7. Slot 1 contains a CPU module, slot 2 contains an I/O module, and slot 5 contains an I/O module. A yellow circle highlights a yellow triangle icon with the text 'Meter-1 Alarm' next to the CPU module. A red circle highlights a red square icon with the text 'AI-2 Out of Range' next to the I/O module in slot 5. Below the rack view is a table of active alarms.

POINT	TAG	CONFIGURATION	INTEGRITY	ACTIVE ALARMS
AI-1	AI 1 Slot5	...		
AI-2	AI 2 Slot5	...	Out of Range	
AO-1	AO 1 Slot5	...		
DO-2	DO 2 Slot5	...		
PI-1	PI 1 Slot5	...		
PI-2	PI 2 Slot5	...		

Below the table, the text 'SLOT 5 - Auxiliary 6-Point IO' is displayed. To the right of this text are three buttons: 'Auto Scan', 'Update', and 'Apply'.

LCD Touchpad

- The LCD Touchpad lets you view and enter configuration and operation parameters for the FloBoss 107.
- You can also troubleshoot and diagnose problems down to the individual input level as well.
- The touchpad is transreflective for high visibility in daylight and is backlit for night viewing.



LCD Touchpad - Operation

- Pressing a label on the screen darkens (reverses) that label from black on white to white on black.
- Pressing a label also turns on the Key Ack (key acknowledge LED).



LCD Touchpad Operation (cont'd)

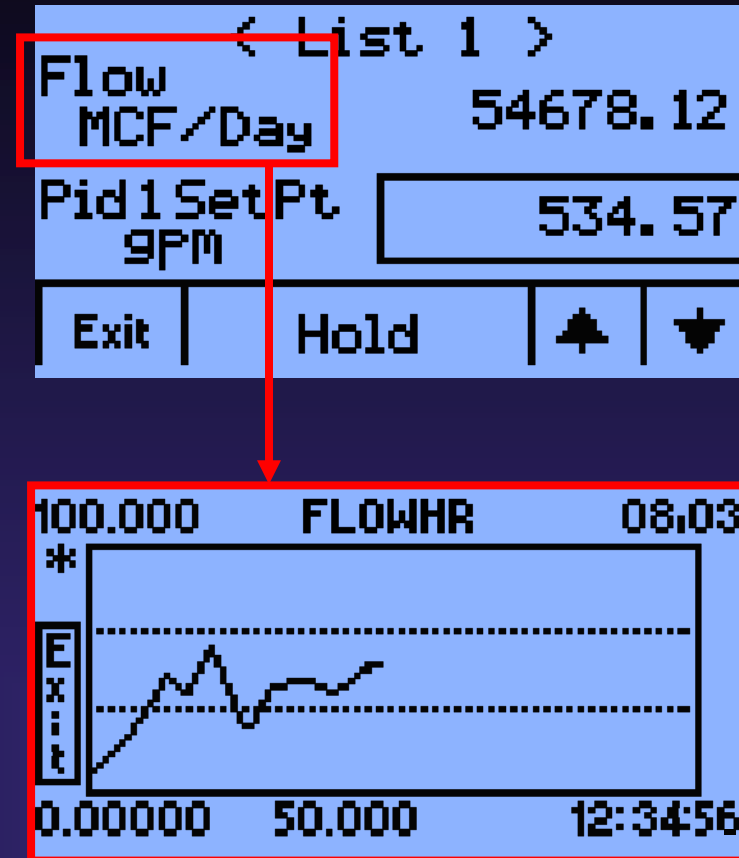
- Data fields that can be edited are surrounded by a “box.”
- Pressing the data field brings up a keypad screen that allows you to enter a new value.
- Once the value is entered, pressing Done brings up a screen requiring you to confirm the change before it is made.

The image shows a sequence of two LCD screens. The top screen displays process data: 'Flow MCF/Day' with a value of 54678.12, and 'Pid1SetPt 9PM' with a value of 534.57. The value 534.57 is enclosed in a red box, and a red arrow points from this box to the keypad screen below. The keypad screen is a 3x4 grid with the following content:

542.58		Cancel	Done
1	2	3	← del
4	5	6	.
7	8	9	0

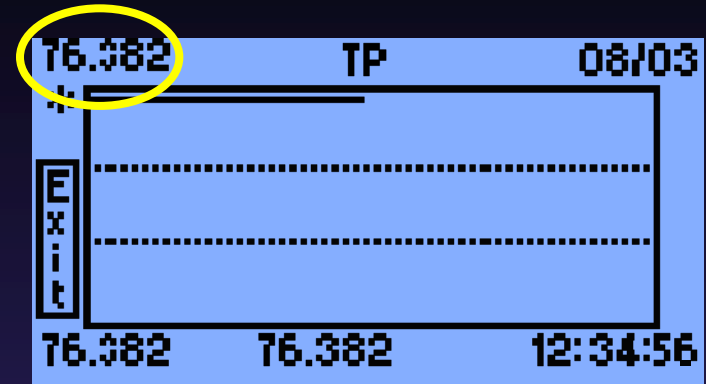
LCD Touchpad Operation (cont'd)

- The Touchpad can display any parameter you select in a dynamic “chart recorder” format.
- Touch the label or units on a parameter screen to display the dynamic chart.
- Charting begins from the moment of touch and continues either for 30 minutes or until you touch **Exit**.

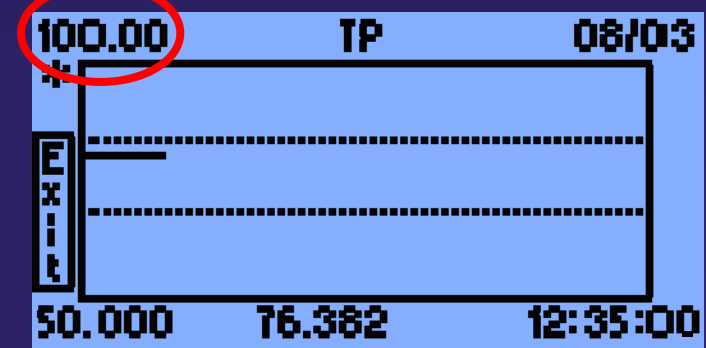


LCD Touchpad Operation (cont'd)

- Chart scaling is configured through ROCLINK 800 to autoscale or it can be user specified.
- Scaling can also be changed dynamically at the LCD touchpad using the numeric keypad screen.
- Values for both upper and lower range limits are entered by the user.



Set	Upper	Range	Cancel
1	2	3	-
4	5	6	.
7	8	9	0



LCD Touchpad - Main Menu


- This is the first page of the main menu for the LCD Touchpad.
 - User Lists: Displays a list of 16 user defined parameter values for display. Up to 4 user lists can be created.
 - Meter Runs: Displays values for up to 4 meter runs.
 - Modules: Displays parameter values associated with each module installed.
 - Chart: Displays historical or dynamic information in a chart format.
- Touching the down ↓ arrow takes you to the next page of the main menu.



Note: Screens depicted on the following pages may vary from those shown depending upon device setup and security settings.

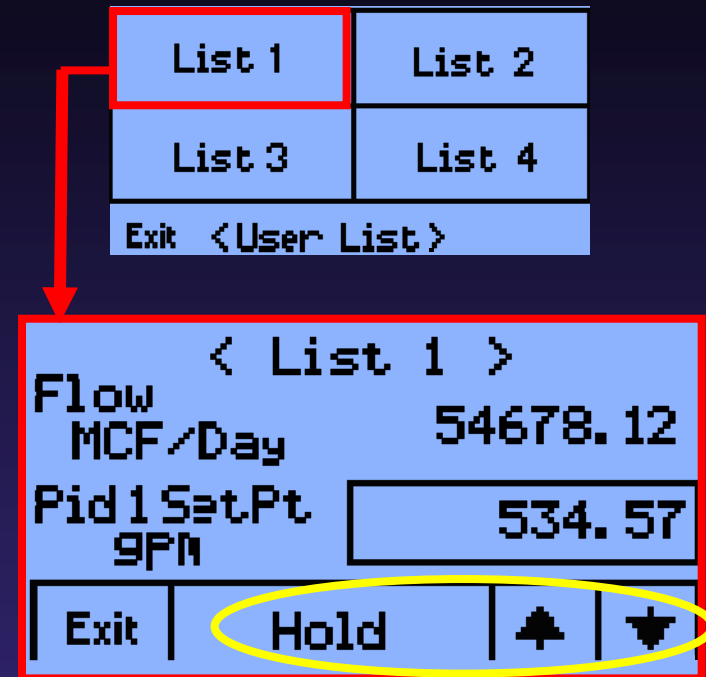
LCD Touchpad - Main Menu (cont'd)

- This is the second page of the main menu.
 - PID: Displays and permits changes to defined PID parameters.
 - System: Enables you to access and modify some general system parameters.
 - Log off: Logs you off the Touchpad screen.
- Touching any item takes you to the corresponding menu.

PID	System
Log off	
< Main Menu > 	

LCD Touchpad - User Lists

- Touching “User Lists” from the main menu brings up the User List menu. Each user list can contain up to 16 user-defined parameters.
- The parameters for each list are automatically scrolled, or you can manually scroll by touching the up ↑ or down ↓ arrow. Hold stops scrolling.
- User lists are defined in ROCLINK 800.



LCD Touchpad - Meter Runs

- Pressing “Meter Runs” from the main menu brings up the meter runs menu.
- Parameters that can be displayed for up to 4 meter runs include:
 - Differential pressure for orifice meters
 - Uncorrected flow for turbine meters
 - Static pressure, Temperature
 - Flowrate, Energy rate
 - Flow today, Energy today
 - Alarms
 - Orifice plate and Pipe diameter

Well #100	Meter #2
Meter #3	Meter #4
Exit < Meter Run >	

< Well #100 >	
Pipe Dia Inches	8.07100
Orif Dia Inches	4.02100
Exit	▼

< Well #100 >	
DP InH2O	125.9000
SP PSIG	895.9000
Exit	▲ ▼

LCD Touchpad - Modules

- Touching “Modules” from the main menu brings up a screen showing the type of module installed in each slot of the FloBoss 107.
- For example, touching CPU brings up the second screen showing the I/O points for the CPU module.
- The numbers 0 to 3 correspond to physical module locations in the base chassis and 4 to 7 to modules located in the expansion rack.

0 CPU	1 rs232	2 rs485	3 Aux
4 Aux	5 Aux	6 Aux	7 Mvs
Exit	Meter	SysAi	Dvs

RTD	AI 1	AI 2	AO 1
DO 2	DI 3	PI 2	
Exit	< Slot #0 >		

LCD Touchpad - Modules (cont'd)

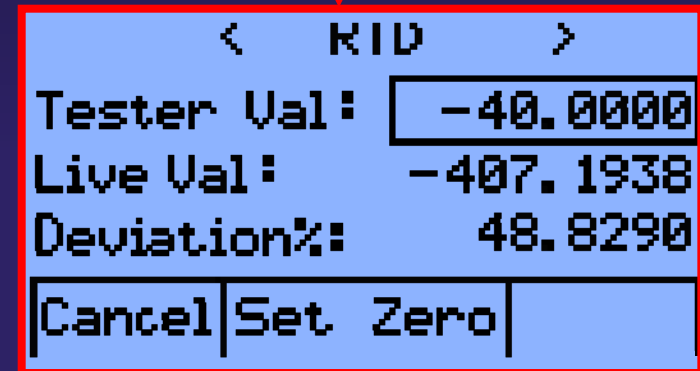
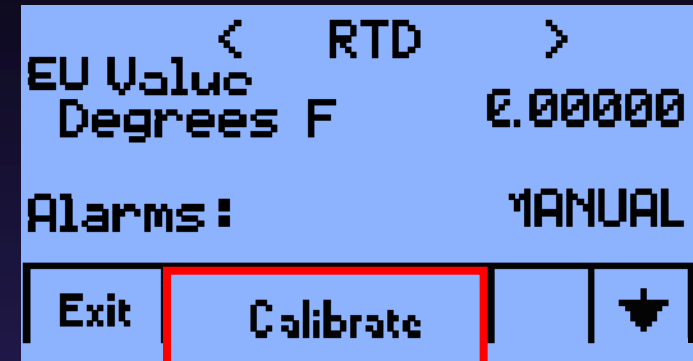
- Touching the AI 2 button from the previous CPU screen brings up a list of parameters for analog input #2.
- You can graph a real-time trend of the EU (engineering units) value by merely touching "EU Value Percent."

RTD	AI 1	AI 2	AO 1
DO 2	DI 3	PI 2	
Exit < Slot #0 >			

< AI 2 Slot 0 >			
EU Value		0.00000	
Percent		0.00000	
Alarms:		MANUAL	
Exit	Calibrate		▼

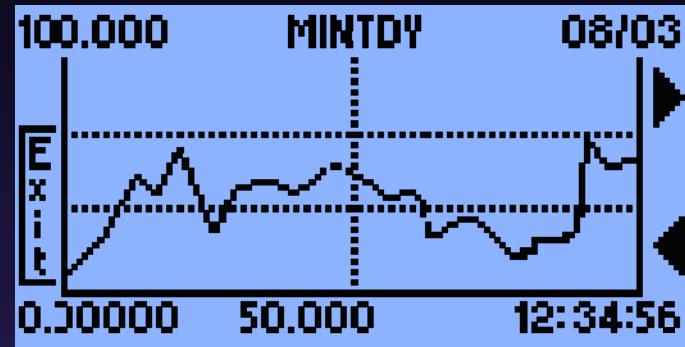
LCD Touchpad – Modules (cont'd)

- Certain module types, such as analog, MVS, and RTD inputs, provide the capability for calibration.
- For calibration, you define a zero point, a span, and up to three midpoints.

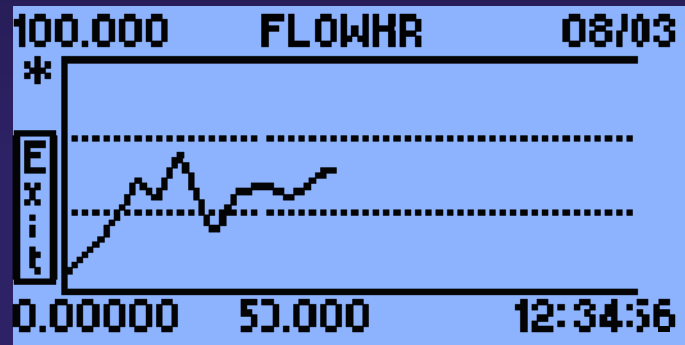


LCD Touchpad - Chart

- Touching “Chart” from the main menu lets you display historic or dynamic information in a chart format.
- The values charted are configured in ROCLINK 800. You can chart up to 16 points.
- Each chart can display up to 54 most recent data values.



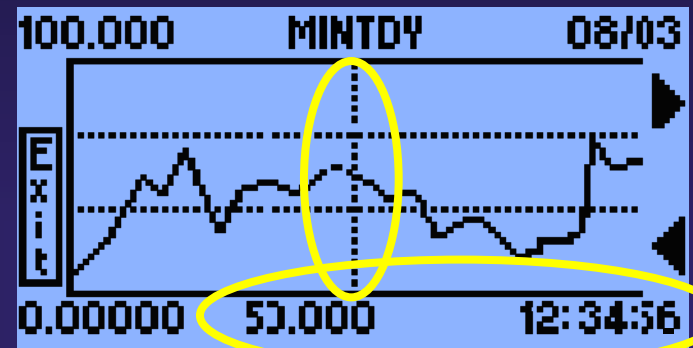
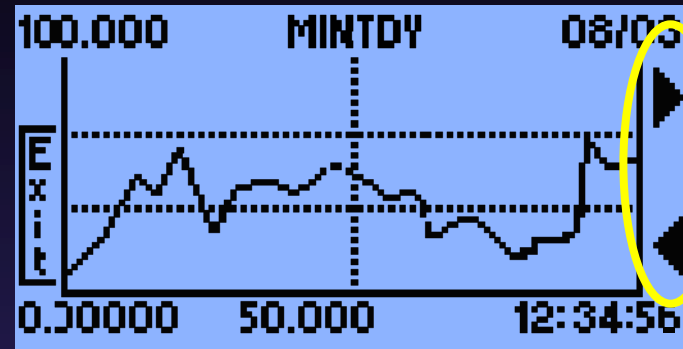
Historical Chart



Dynamic Chart

LCD Touchpad – Chart (cont'd)

- The arrows on the right side of the historical chart allow you to scroll forward or backward on the historical record (up to 60 days, as defined in ROCLINK 800).
- The vertical dotted line indicates the current point on the historical record.
- The value and time stamp of the current value are shown.



Historical Charts

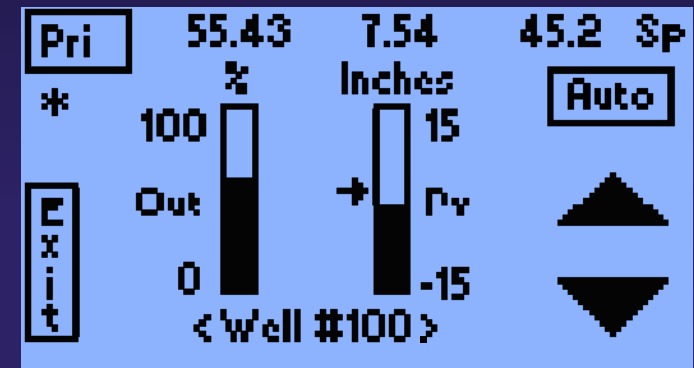
LCD Touchpad - PID

- Touching “PID” from the main menu gives you a choice of basic or advanced methods for displaying and changing PID loops . You can define up to eight PID loops.
- The Basic method accesses a series of parameter screens you use to establish primary and override process variables and setpoints.
- The Advanced method accesses a single graphical screen that lets you perform the same tasks.

Primary	Override
Mode	Output

Exit < Well #100 >

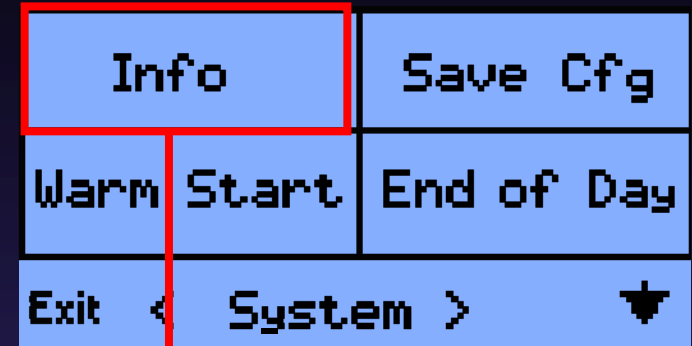
PID Parameters Menu



Advanced PID Loop View

LCD Touchpad - System

- Touching “System” from the main menu displays pertinent system information including:
 - Time and date
 - ROC name
 - Firmware revision
 - LCD revision
 - Device address
 - Device group
 - Contract hour
 - CPU load



LCD Touchpad – Device Directed Diagnostics

- Device Directed Diagnostics is a new method of device Integrity and Alarm diagnosis being introduced on the FloBoss 107.
- The LCD Touchpad takes advantage of these Alarm notifications by providing users with a unique capability to locate and diagnose problems.
- The LCD Touchpad provides device Integrity notifications by displaying an **I** and alarm notifications by displaying an **A** on the LCD Touchpad.

LCD Touchpad - Alarms

- Once logged on, the alarm LED on the touchpad housing illuminates red whenever an alarm condition occurs in the FloBoss 107.
- In addition, a blinking asterisk next to an item in the main menu indicates an integrity or alarm issue with the item. In this example, one of the plug-in modules is detecting an alarm.



LCD Touchpad – Alarms (cont'd)

- Touching “Modules” from the main menu brings up the modules screen showing that the CPU is in alarm.
- Touching “CPU” brings up the CPU screen showing a blinking i and ia in the upper right corner of analog input 2 and analog output 1.
- The i indicates an integrity issue and the a an alarm issue with these points.

0 *	1	2	3
Cpu	rs232	rs485	Hux
4	5	6	7
Aux	Aux	Aux	Mvs
Exit	Meter	SysAi	Dys

Modules Screen

RTD	AI 1	AI 2 i	AO 1 ia
DO 2	DI 3	PI 2	
Exit	< Slot #0 >		

CPU Module Screen

LCD Touchpad – Alarms (cont'd)

- Touching “AI 2” from the previous screen brings up the point display showing that the cause of the integrity issue is a Point Fail.
- Because this is an integrity issue, the probable cause is a hardware problem between AI and the field device. Once the problem is found and corrected, the alarm will automatically clear.



LCD Touchpad - Security

- Touchpad security enables you to selectively restrict or permit access to Touchpad functions for up to 16 users as defined in ROCLINK 800.
- You can define an ID which can access all or only one user list or just the Touchpad's "standard lists."
- Additionally, the ID can have edit capability or view-only capability. You define IDs and their accesses to meet your needs.

< Enter PIN >			Cancel
1	2	3	-
4	5	6	.
7	8	9	0

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Highest Ranking vs. Major Process Competitors in 45 Pertinent Product Categories for 2008



	1 st	2 nd	3 rd	Total
Emerson	24*	12	4	40**
Rockwell Automation	12	6	0	18
Siemens	2	3	7	12
Invensys	1	4	6	11
Endress+Hauser	2	5	1	8
ABB	1	2	6	9
Yokogawa	0	3	2	5
Honeywell	1	0	2	3

* Twice the #1 products than the next competitor.

** 89% of Emerson products ranked 1st, 2nd, or 3rd in 45 pertinent product categories.

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